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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/540,308

12/12/2005

Sven Hansen

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EXAMINER

MANUEL, GEORGE C

ART UNIT

PAPER NUMBER

3762

NOTIFICATION DATE

DELIVERY MODE

07/30/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patents@hahnlaw.com  
akron-docket@hotmail.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/540,308	<b>Applicant(s)</b> HANSEN ET AL.	
	<b>Examiner</b> George Manuel	<b>Art Unit</b> 3762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

In view of the amendment, filed 3/19/08, the rejection of claims 1-20 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention is withdrawn.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1-5, 10-15, 17-19 and 21 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Florio et al (US 6,519,493).

Florio et al disclose a stimulation rate that is higher than an intrinsic rate comprises an overdrive pacing margin that is selectively increased or decreased to maintain a degree of pacing at 95% paced beats. If the intrinsic rate is 60 bpm, the cardiac stimulation device 10 overdrive paces the heart at a rate of 65 ppm. If the intrinsic rate increases to 80 bpm, then the overdrive pacing rate

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automatically increases to 85 ppm. The examiner is interpreting a time window to comprise the "count" shown, for example in Fig. 3.

Regarding claim 21, it is desirable within patients prone to tachyarrhythmias to ensure that most beats of the heart are paced beats, as any unpaced beats may be ectopic beats. Florio et al meet this desirability by continually providing overdrive pacing of the heart at a uniform rate, thus reducing the occurrence of ectopic pulses. Florio et al provide overdrive pacing at a uniform rate that is greater than a natural heart rate and less than a tachycardia rate to render the heart tissue uniform and periodic.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-9 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Florio et al (US 6,519,493).

Florio et al show all of the claimed features except for a predetermined degree being between 10 and 20% of transconductions or between 10 and 20% of transconducted stimuli in relation to a total number of ventricular events.

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Florio et al teach attaining at least a minimum of 90% paced beats. If fewer than 90% of the beats are paced beats (i.e., at least two beats out of every ten beats are intrinsic beats) the overdrive pacing rate is increased; otherwise it is decreased. This provides a feedback loop that maintains the pacing rate at a rate sufficient to provide about 90% paced beats on the average. The examiner is interpreting transconductions to comprise the sinus node pulses conducted to the various atria and ventricles of the heart via certain, normal conduction pathways.

One of ordinary skill in the art would have found it obvious to range the transconductions to between 10 and 20% because two beats out of 10 represents 20% and one beat out of 10 represents 10%.

### ***Response to Arguments***

Applicant's arguments filed 3/19/08 have been fully considered but they are not persuasive. The assertion that operation of a cardiac stimulator in VVI mode is not suggested is without merit. Florio et al teach various internal components of the pacemaker operate to sense the electrical activity of the heart 12, such as the presence of P-waves and R-waves, using electrodes 18 and 22 and to selectively stimulate the heart in response to events sensed within the heart 12 by conducting electrical stimulation pulses to the heart 12 using the electrodes 18 and 22. Clearly, the detection of a natural ventricular contraction within a predetermined window would inhibit the pacemaker from generating a ventricular stimulation pulse. Otherwise, the pacemaker battery would be quickly

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depleted by continuously pacing the heart. Energy would be wasted on naturally occurring pacing when it isn't necessary to pace with the pacemaker.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Manuel whose telephone number is (571) 272-4952.

/George Manuel/  
Primary Examiner  
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